



BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emissions Standards into Procurement Policies.

[Also filed at the California Energy Commission]

Rulemaking 06-04-009  
(Filed April 13, 2006)

CEC Docket 07-OIIP-01

**OPENING COMMENTS OF THE INDEPENDENT ENERGY PRODUCERS ASSOCIATION ON MODELING-RELATED ISSUES**

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OF THE STATE OF CALIFORNIA**

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PRODUCERS ASSOCIATION ON MODELING-RELATED  
ISSUES**

Pursuant to the Administrative Law Judge's Ruling Requesting Comments on Modeling-Related Issues (issued November 9, 2007 and modified by ruling dated November 30, 2007), the Independent Energy Producers Association ("IEP") submits its comments on modeling-related issues. IEP's comments are organized as responses to the questions posed in the November 9, 2007 ruling. These comments are also being filed in Docket 07-OIIP-01 of the California Energy Commission.

**I. INTRODUCTION**

IEP recognizes the efforts made by the Commission's consultants in Stage 1 of the greenhouse gas ("GHG") modeling project. Much progress has been made, and IEP agrees with the Commission's desire to understand the cost implications of various resource addition and load reduction strategies designed to enable compliance with the statewide mandates of AB 32. IEP intends to become actively involved in Stage 2 of the Commission's GHG modeling process and appreciates the opportunity to offer these comments.

## **II. ANSWERS TO SPECIFIC QUESTIONS**

### **Q6. Does E3's modeling documentation adequately document the methodology, inputs, and other assumptions underlying its model? If not, what additional documentation should be added?**

IEP's review of the documentation prepared by E3 leads to a conclusion that while assumptions regarding incremental resource additions are fairly well-documented, there is no discussion of assumptions and modeling inputs as they pertain to the existing infrastructure, either in California or the balance of the WECC. Absent documentation of this these data and assumptions, the project's stated goal of transparency cannot be attained. Data and assumptions that require documentation or revelation include, but are not limited to:

- Thermal unit
  - ownership
  - size (MW)
  - heat rates
  - forced outage rates
  - maintenance rates
  - chronological constraints
  - O&M cost
- Hydro
  - capacity and energy by region
  - seasonal/monthly energy availability
- System Reliability
  - ancillary service requirements

In addition to documentation of the above data and assumptions, expansion of the

documentation of the GHG calculator spreadsheet is required to allow full use and validation of that tool. The spreadsheet is quite complex, but its documentation is limited to instructions for changing a limited amount of input data and reading summary results. This documentation should be expanded to provide parties an understanding of how the model is intended to work and how and whether data and assumptions other than selected resource additions can be changed and the results evaluated.

**Q7. Provide feedback, as desired or appropriate, on the structure and approach taken by E3 in its GHG Calculator spreadsheet tool.**

As noted above, there is insufficient documentation of the model to be able to respond to this question.

**Q8. Provide feedback, as desired or appropriate, on the data sources used by E3 for its assumptions in its issue papers. If you prefer different assumptions or sources, provide appropriate citations and explain the reason for your preference.**

IEP appreciates that E3 has relied on publicly available data as a basis for its assumptions regarding resource construction cost and operation characteristics, renewable supply curves, and fuel costs. IEP is concerned, however, that the data sources are public agencies which have never built or operated a power plant. IEP and its members are still in the process of evaluating the resource cost estimates used by E3 and will offer recommendations if and when they become available.

At this time IEP notes that E3's assumptions regarding biomass fuel costs are (a) not discussed in its documentation (Section 9), and (b) markedly lower than other any of the other biomass fuel cost estimates that are documented. In light of E3's reliance on biomass

resources in its “Aggressive Policy” Case, IEP suggests review of biomass fuel cost assumptions.

**Q9. Are uncertainties inherent in the resource potential and cost estimates adequately identified? Does E3’s model provide enough flexibility to test alternative assumptions with respect to these uncertainties?**

E3’s documentation reflects ranges of costs, but to date its modeling reflects only point estimates. IEP recommends that Stage 2 efforts include assigning probabilities to cost distributions and specific modeling of a broad range of cost/resource mix cases.

As to the model’s ability to test alternative assumptions, the lack of documentation of the model prevents a response to this question.

**Q10. Has the E3 model adequately accounted for the implications of increased reliance on preferred resources (renewables, efficiency) on system costs?**

IEP does not have a position on this issue at this time.

**Q11. Should E3’s model, in Stage 2, attempt to model potential market transformation scenarios, in the form of cost decreases, new technologies, or behavioral changes? What might be an appropriate way to characterize such potential for market transformation?**

IEP does not have a position on this issue at this time. IEP notes, however, that the costs of photovoltaic resources have increased, rather than decreased, as increased demand has pushed up the cost of the components of this zero GHG technology.

**Q12. What specific flexible GHG emission reduction mechanisms to mitigate**

**the economic impacts of achieving the desired GHG emission reductions should be modeled in Stage 2?**

IEP does not have a position on this issue at this time. Stage 2 should, among other things, focus on more detailed transmission modeling to assure that resource addition strategies are achievable and their costs properly reflected and recognized. Stage 1 modeling of transmission requirements and capabilities to accommodate resource additions in either the “Business As Usual” or the “Aggressive Policy” cases was insufficient to place any confidence in the cost implications of either case.

**Q13. What output metric or metrics should be utilized to evaluate the least cost way to meet a 2020 emission reduction target for the sector?**

It is important to remember that the GHG emission reductions goals set forth in AB 32 are not sector specific. Regulators at all levels of government must recognize that simple pro-rata sector reductions may not be the least-cost or most-effective way to achieve the statewide, all-sector reduction goals. For example, it is possible that the most cost-effective way for California to meet its goals is to electrify the transportation sector. The net effect of this policy path is that, in all likelihood, electric sector GHG emissions will increase, while statewide GHG emissions will decrease. Considering these implications, it is important that the modeling tools being developed by the Commission have the flexibility to evaluate a broader range of emission reduction strategies than a simple sector specific target.

Respectfully submitted this 4th day of January, 2008 at San Francisco, California.

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**CERTIFICATE OF SERVICE**

I, Melinda LaJaunie, certify that I have on this 4<sup>th</sup> day of January 2008 caused a copy of the foregoing

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PRODUCERS ASSOCIATION ON MODELING-RELATED ISSUES**

to be served on all known parties to R.06-04-009 listed on the most recently updated service list available on the California Public Utilities Commission website, via email to those listed with email and via U.S. mail to those without email service. I also caused courtesy copies to be hand-delivered as follows:

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I declare under penalty of perjury that the foregoing is true and correct.  
Executed this 4<sup>th</sup> day of January 2008 at San Francisco, California.

/s/ *Melinda LaJaunie*  
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